## **LISTING OF CLAIMS:**

The following listing of claims replaces all previous versions, and listings, of claims in the present application.

Please cancel claims 1-8 and 12 without prejudice or disclaimer.

Claims 1-8 (Canceled).

9. (Currently amended) The method according to claim 2, A method for correcting a gain of an output signal produced from a resolver that detects a rotation of a rotary device, the method comprising:

picking, for a certain time period, a maximal sine value and a minimal sine value from a sine output signal included in the output signal, and a maximal cosine value and a minimal cosine value from a cosine output signal included in the output signal;

calculating a first differential value between the maximal sine value and the minimal sine value, and a second differential value between the maximal cosine value and the minimal cosine value;

correcting a gain differential between the sine output signal and the cosine output signal based on the first and second differential values; and

further comprising a step of determining a candidate gain differential between the sine output signal and the cosine output signal based on the first and second differential values before the correcting step, wherein the correcting step is performed periodically or at a start of the method, and is inhibited when the candidate gain differential is out of a certain range.

10. (Currently amended) The method according to claim 2, further comprising steps of: A method for correcting a gain of an output signal produced from a resolver that detects a rotation of a rotary device, the method comprising:

picking, for a certain time period, a maximal sine value and a minimal sine value from a sine output signal included in the output signal, and a maximal cosine value and a minimal cosine value from a cosine output signal included in the output signal;

calculating a first differential value between the maximal sine value and the minimal sine value, and a second

differential value between the maximal cosine value and the minimal cosine value;

correcting a gain differential between the sine output signal and the cosine output signal based on the first and second differential values;

determining whether the output signal of the resolver is abnormal; and

inhibiting the correcting step when the output signal of the resolver is determined to be abnormal.

11. (Currently amended) The method according to claim 2, further comprising steps of: A method for correcting a gain of an output signal produced from a resolver that detects a rotation of a rotary device, the method comprising:

picking, for a certain time period, a maximal sine value and a minimal sine value from a sine output signal included in the output signal, and a maximal cosine value and a minimal cosine value from a cosine output signal included in the output signal;

calculating a first differential value between the maximal sine value and the minimal sine value, and a second differential value between the maximal cosine value and the minimal cosine value;

correcting a gain differential between the sine output signal and the cosine output signal based on the first and second differential values;

detecting whether a rotational speed of the rotary device is not greater than a certain speed and a rotational direction of the rotary device is not reversed; and

inhibiting the correcting step when the rotational speed is determined to be greater than the certain speed or the rotational direction is determined to be reversed.

## 12. (Canceled).

- 13. (New) The method according to claim 9, wherein the correcting is performed periodically or at a start of the method.
- 14. (New) The method according to claim 10, wherein the correcting is performed periodically or at a start of the method.
- 15. (New) The method according to claim 11, wherein the correcting is performed periodically or at a start of the method.